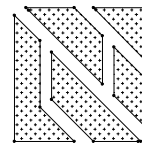


STANDARD DETAILS FOR 3" CONCRETE COVER

T-WALL® RETAINING WALL SYSTEM

DESIGNER



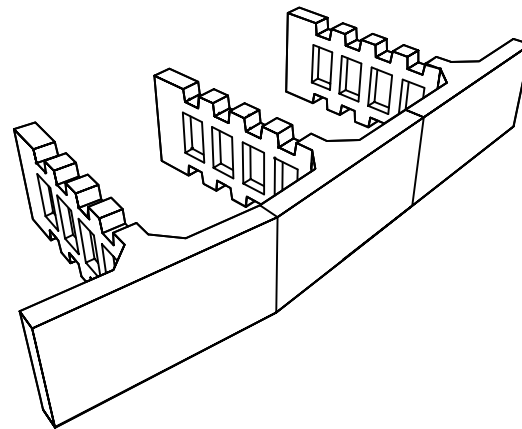
THE NEEL COMPANY

8328-D TRAFORD LANE
SPRINGFIELD, VIRGINIA 22152
PH: (703) 913-7858
FX: (703) 913-7859

PRECASTER

OLDCASTLE PRECAST, INC

5995 SOUTEL DR.
JACKSONVILLE, FL 32219
PH: (904) 768-7081
FX: (904) 768-8428



MISCELLANEOUS NOTES:

1. DESIGNER:
THE NEEL COMPANY
8328-D TRAFORD LANE
SPRINGFIELD, VA 22152
PH: (703) 913-7858
FX: (703) 913-7859
2. PRECASTER:
OLDCASTLE PRECAST INC.
5995 SOUTEL DR.
JACKSONVILLE, FL 32219
PH: (904) 768-7081
FX: (904) 768-8428
3. MATERIALS SUPPLIED BY PRECASTER:
-PRECAST T-WALL UNITS
-PRECAST SHEAR KEYS
-HORIZONTAL JOINT MATERIAL
-VERTICAL JOINT MATERIAL AND ADHESIVE
-SHEAR KEY JOINT MATERIAL

DESIGN NOTES:

1. DESIGN IS BASED ON THE ASSUMPTION THAT THE MATERIAL WITHIN THE RETAINING WALL VOLUME, METHODS OF CONSTRUCTION, AND QUALITY OF PREFABRICATED MATERIALS SHALL CONFORM TO SPEC SECTION 548 - RETAINING WALL SYSTEMS.
2. SOIL PARAMETERS:
-SEE WALL CONTROL DRAWINGS FOR SOIL CHARACTERISTICS OF FOUNDATION MATERIAL TO BE USED IN THE DESIGN OF THE WALL SYSTEM. THE CONTRACTOR SHALL PROVIDE SOIL DESIGN PARAMETERS FOR BACKFILL MATERIAL BASED ON THE ACTUAL SOIL CHARACTERISTICS UTILIZED AT THE SITE. THE VALUE OF ϕ , C AND GAMMA SHALL BE PROVIDED IN THE SHOP DRAWINGS
3. FACTORS OF SAFETY:
-OVERTURNING - 2.0
-SLIDING - 1.5
-INTERNAL PULLOUT - 1.5
-BEARING CAPACITY - 2.5
-OVERALL STABILITY - 1.5
4. THE DESIGN CONTAINED ON THESE DRAWINGS IS BASED ON INFORMATION PROVIDED BY THE OWNER. ON THE BASIS OF THIS INFORMATION, THE NEEL COMPANY IS RESPONSIBLE FOR INTERNAL STABILITY OF THE STRUCTURE ONLY. EXTERNAL STABILITY DESIGN, INCLUDING FOUNDATION AND SLOPE STABILITY, IS THE RESPONSIBILITY OF OTHERS.
5. PANELS WITH CANTILEVERED (EXTENDED) FACE SHALL ONLY BE USED TO AVOID OBSTRUCTIONS AS APPROVED ON THE SHOP DRAWINGS.

MATERIALS NOTES:

1. PRECAST CONCRETE:
-PRECAST T-WALL UNITS - PER SPEC SECTION 548
-PRECAST SHEAR KEYS - PER SPEC SECTION 548
2. C.I.P. CONCRETE:
-C.I.P. LEVELING PAD - PER SPEC SECTION 548
-OTHER C.I.P. CONCRETE - PER SPEC SECTION 548
3. REINFORCING STEEL:
-PER SPEC SECTION 548
4. JOINT MATERIAL:
-HORIZONTAL JOINT FILLER:
-1/2" x 4" x 5'-0"
-PREFORMED EPDM
-DUROMETER: 80 - 90
-VERTICAL JOINT COVER:
-TENSAR DC4205 OR EQUAL
-12" WIDE x HEIGHT OF JOINT
-GEOCOMPOSITE MEETING REQUIREMENTS OF SPEC SECTION 548
-SHEAR KEY WRAP:
-1/4" x 8" x 24"
-AVI ASTRO-FOAM AF-250
5. BACKFILL:
-PER SPEC SECTION 548

CONSTRUCTION NOTES:

1. ALL CONSTRUCTION PROCEDURES SHALL COMPLY WITH SPEC SECTION 548 AND THE "T-WALL CONSTRUCTION MANUAL" (PROVIDED BY THE NEEL COMPANY OR OLDCASTLE PRECAST, INC). IN THE EVENT OF A DISCREPANCY BETWEEN THE SPEC AND THE "T-WALL CONSTRUCTION MANUAL", THE SPEC SHALL CONTROL.
2. FOR LOCATION AND ALIGNMENT OF T-WALL STRUCTURE, SEE RETAINING WALL CONTROL PLANS.
3. T-WALL STRUCTURES ON CURVES SHALL BE BUILT IN CHORDS AS SHOWN IN THE T-WALL DESIGN DRAWINGS.
4. IF MANHOLES OR DROP INLETS ARE PRESENT, THEY SHALL BE LOCATED AS SHOWN IN THE T-WALL DESIGN DRAWINGS.
5. IF PILES ARE LOCATED WITHIN THE RETAINING WALL VOLUME, THEY SHALL BE DRIVEN BEFORE CONSTRUCTION OF THE T-WALL STRUCTURE.
6. T-WALL UNITS SHALL BE PLACED ONE ROW AT A TIME, AND BACKFILLED BEFORE PLACEMENT OF THE NEXT ROW.
7. IF A STRUCTURE EXCEEDS 20' IN HEIGHT, THE FINISH GRADE AT THE FACE OF THE WALL SHALL BE PLACED AND COMPACTED BEFORE WALL CONSTRUCTION EXCEEDS 20' IN HEIGHT.
8. THE CONTRACTOR IS RESPONSIBLE FOR CONTROLLING STORM WATER DRAINAGE IN THE VICINITY OF THE WALL DURING CONSTRUCTION. STORMWATER RUNOFF SHALL BE COLLECTED AND DISCHARGED AWAY FROM THE WALL AND THE RETAINING WALL VOLUME.

THIS SYSTEM SHALL NOT BE USED FOR WALLS WITH ACUTE INTERIOR CORNERS IN SALT WATER ENVIRONMENTS.

THIS SYSTEM MAY BE USED IN ALL ENVIRONMENTS.

STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION

RETAINING WALL SYSTEM THE NEEL COMPANY T-WALL (3" COVER)

Names	Dates	Approved By			
Designed By	JMC	10/01/98	 State Structures Design Engineer		
Drawn By	CAA	10/01/98	Revision	Sheet No.	Index No.
Checked By	JMC	10/01/98	04	1 of 20	5010

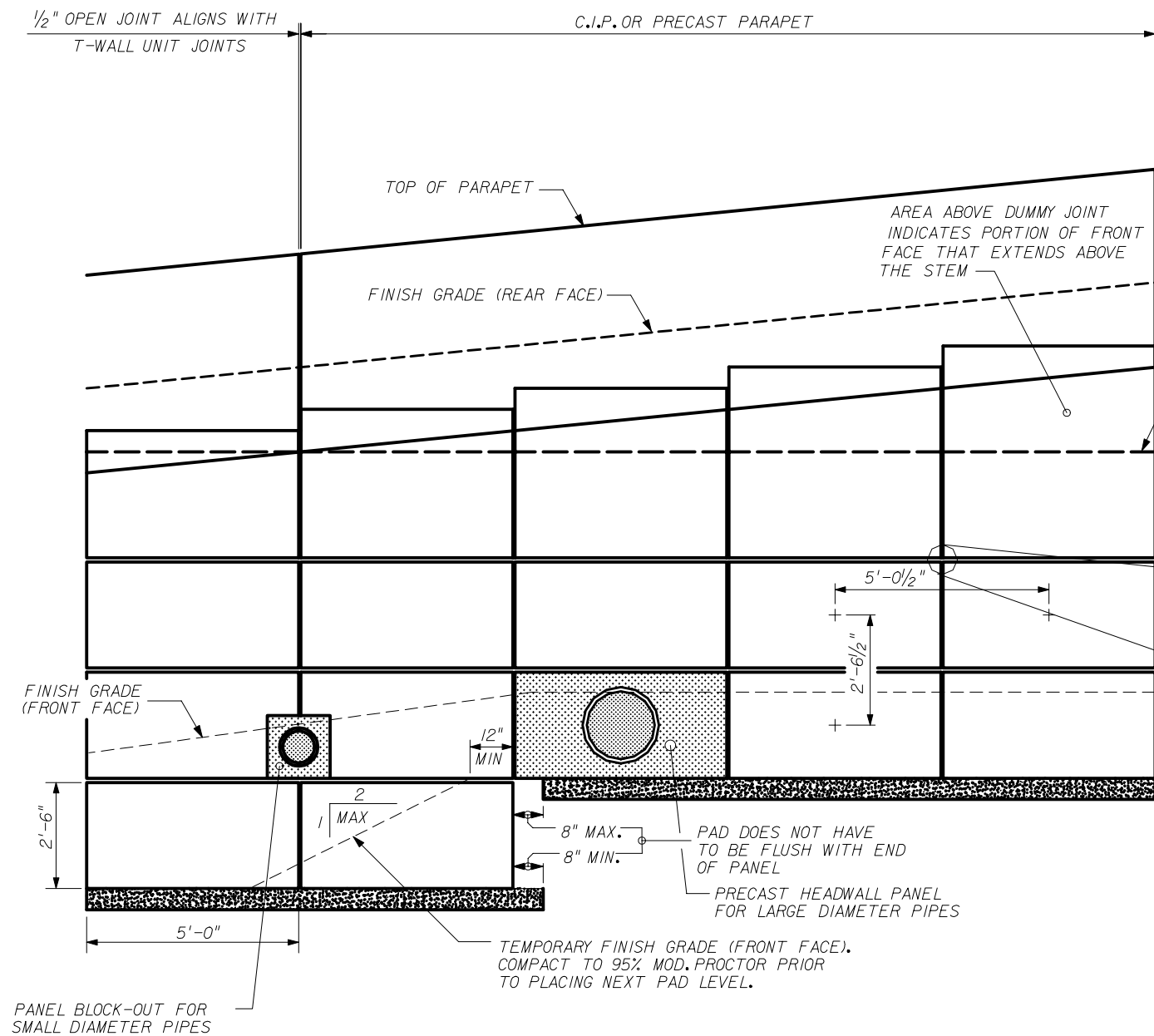


THE NEEL COMPANY

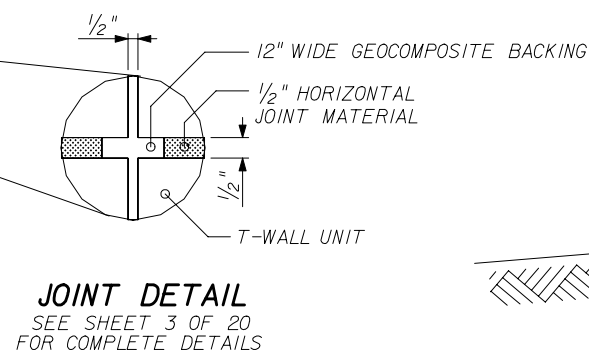
8328-D TRAFORD LANE
SPRINGFIELD, VIRGINIA 22152
PH: (703) 913-7858
FX: (703) 913-7859

OLDCASTLE PRECAST, INC

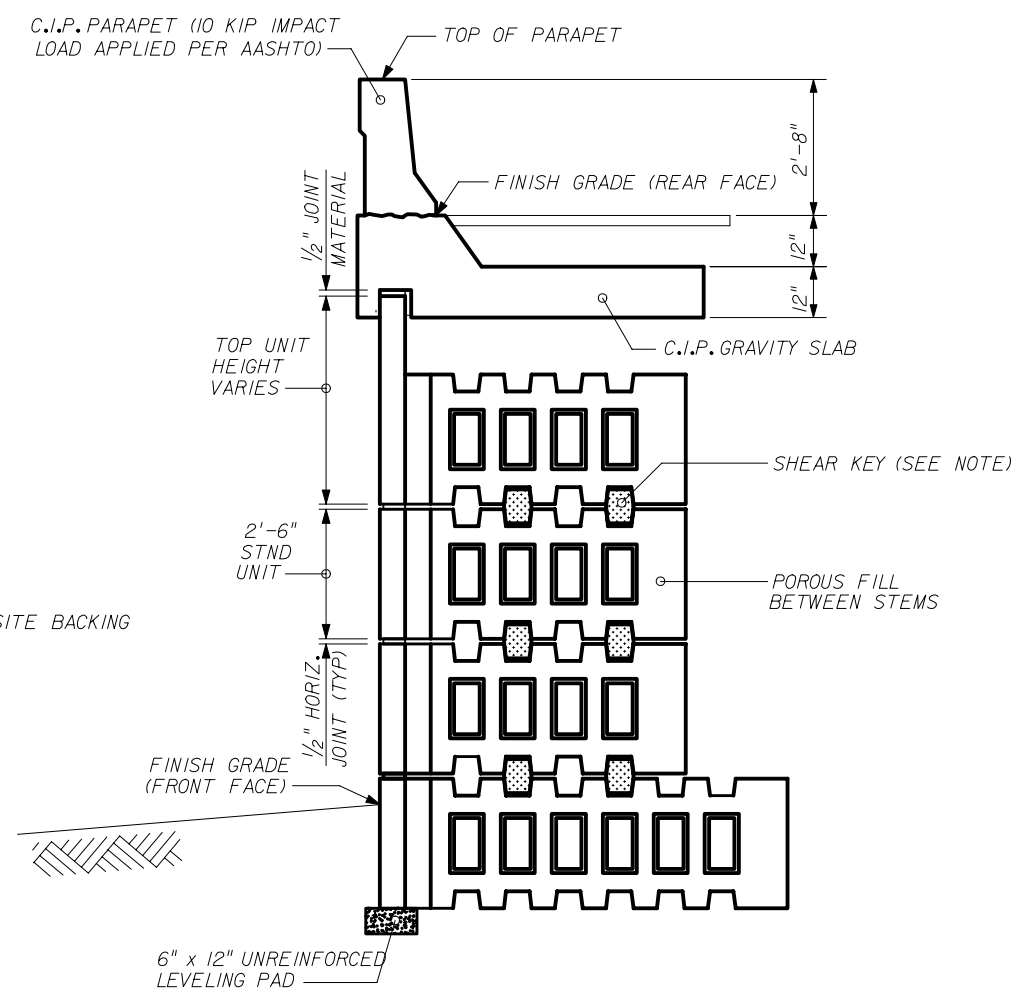
5995 SOUTEL DR.
JACKSONVILLE, FL 32219
PH: (904) 768-7081
FX: (904) 768-8428



PART ELEVATION SHOWING TYPICAL DETAILS
(NO SCALE)



JOINT DETAIL
SEE SHEET 3 OF 20
FOR COMPLETE DETAILS



SECTION SHOWING TYPICAL DETAILS
(NOT ALL DETAILS APPLY TO EACH WALL)

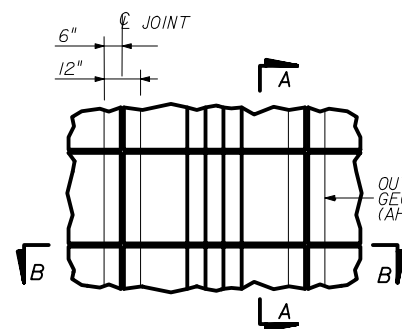
NOTE: ALL EXTENDED FACE TOP UNITS REQUIRE A MINIMUM OF TWO SHEAR KEYS. ALL OTHER UNITS ARE AS SHOWN BELOW:

- TOP UNITS - 2 SHEAR KEYS
- 6' STEM - 2 SHEAR KEYS
- 8' STEM - 2 SHEAR KEYS
- 10' STEM - 2 SHEAR KEYS
- 12' STEM - 2 SHEAR KEYS
- 14' STEM - 3 SHEAR KEYS
- 16' STEM - 3 SHEAR KEYS

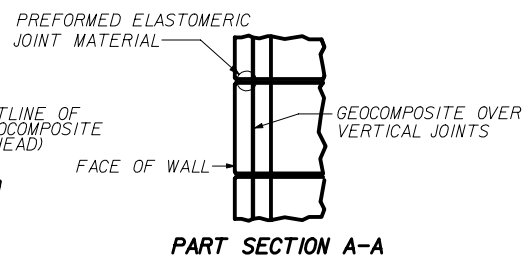
THE NEEL COMPANY
8328-D TRAFORD LANE
SPRINGFIELD, VIRGINIA 22152
PH: (703) 913-7859
FX: (703) 913-7859

OLDCASTLE PRECAST, INC.
5995 SOUTHEL DR.
JACKSONVILLE, FL 32219
PH: (904) 768-7061
FX: (904) 768-8428

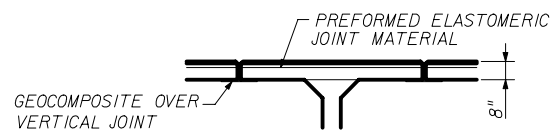
STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION				
RETAINING WALL SYSTEM THE NEEL COMPANY T-WALL (3" COVER)				
Names	Dates	Approved By <i>[Signature]</i>		
Designed By	JMC	10/01/98	State Structures Design Engineer	
Drawn By	CAA	10/01/98	Revision	Sheet No.
Checked By	JMC	10/01/98	04	2 of 20
				Index No. 5010



PART ELEVATION - REAR FACE



PART SECTION A-A

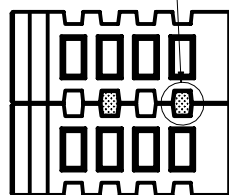


PART SECTION B-B

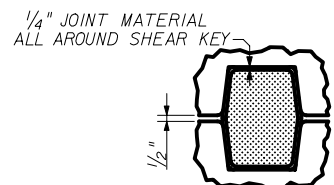
- NOTES:
- HORIZONTAL JOINT:
1/2" x 4" x 5'-0" PREFORMED ELASTOMERIC JOINT MATERIAL
 - VERTICAL JOINT:
1/2" SPACE
12" WIDE GEOCOMPOSITE BACKING, CENTERED ABOUT JOINT CENTERLINE.

JOINT MATERIAL DETAILS

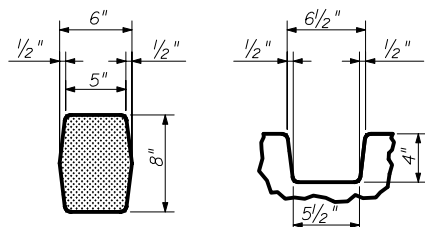
SHEAR KEY WRAPPED IN JOINT MATERIAL. SEE DETAILS THIS SHEET.



PART SECTION



SHEAR KEY / JOINT MATERIAL ARRANGEMENT

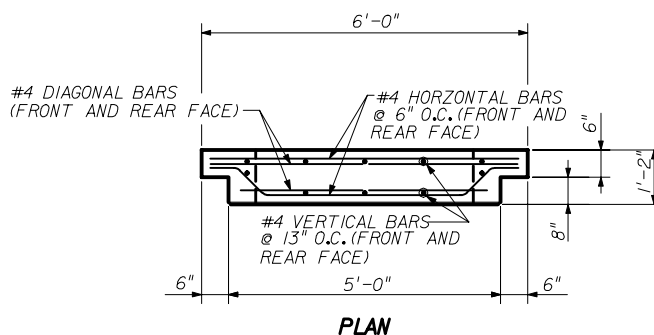
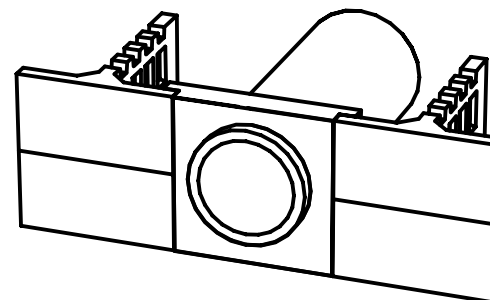


SHEAR KEY DIMENSIONS

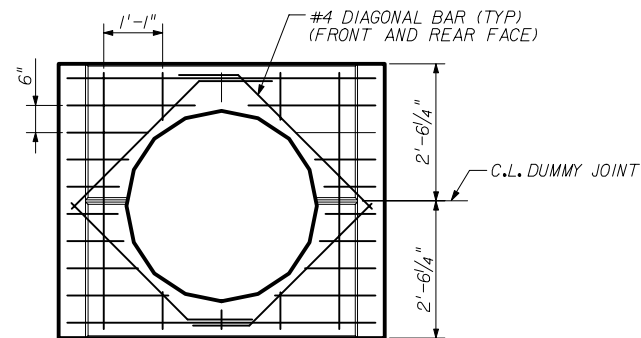
SHEAR KEY BLOCKOUT DIM'S

SHEAR KEY DETAILS

- NOTES:
- SHEAR KEY JOINT MATERIAL:
MINIMUM OF ONE 1/4" x 8" x 24" PIECE OF AVI ASTRO-FOAM AF-250 PER SHEAR KEY.
 - JOINT MATERIAL MAY BE ADDED OR REMOVED TO AID IN SHIMMING AND ALIGNING, HOWEVER SHEAR KEY MUST FIT SNUG IN THE SHEAR KEY BLOCKOUT WHEN UNIT IS IN ITS FINAL POSITION.
 - MINIMUM OF 2 SHEAR KEYS REQUIRED PER UNIT. SEE NOTES ON SHEET 2 OF 20, 'TYPICAL DETAILS (1)'.



PLAN



ELEVATION (FRONT FACE)
PRECAST HEADWALL PANEL
FOR LARGE DIAMETER PIPES

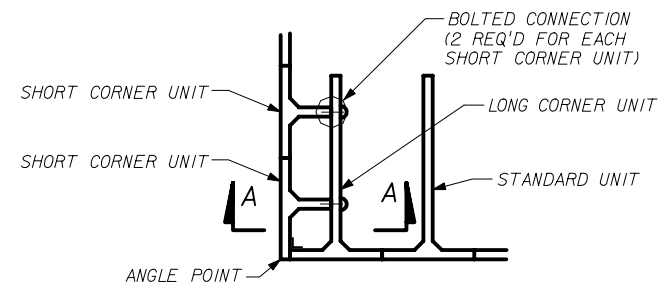
THE NEEL COMPANY
8528 O'FRATORD LANE
SPRINGFIELD, VIRGINIA 22152
PH: (703) 913-7858
FX: (703) 913-7859

OLDCASTLE PRECAST, INC.
5995 SOUTHEL DR.
JACKSONVILLE, FL 32219
PH: (904) 768-7081
FX: (904) 768-8428

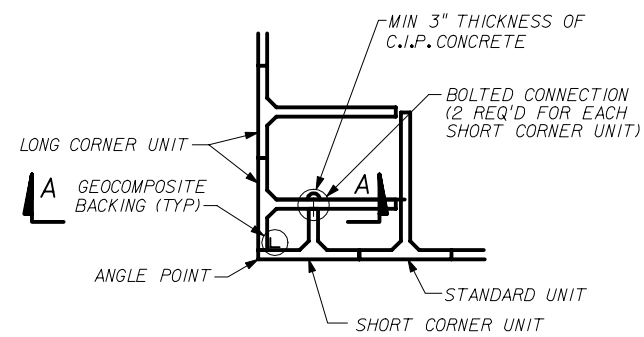
STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION

RETAINING WALL SYSTEM
THE NEEL COMPANY T-WALL
(3" COVER)

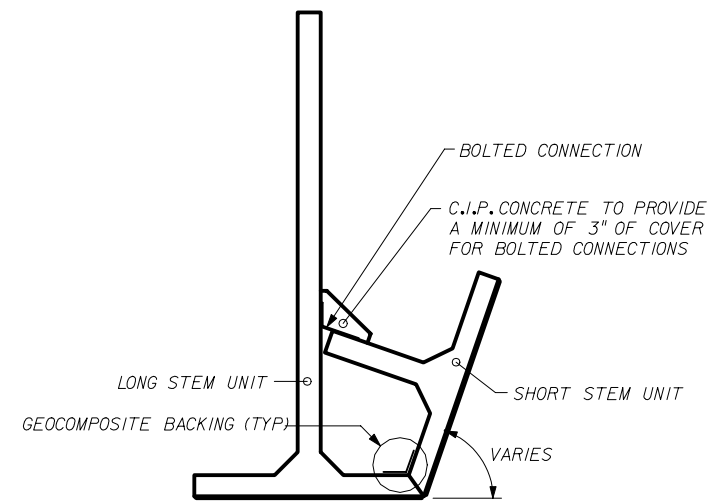
Names	Dates	Approved By <i>[Signature]</i>		
Designed By	JMC	10/01/98	State Structures Design Engineer	
Drawn By	CAA	10/01/98	Revision	Sheet No.
Checked By	JMC	10/01/98	04	3 of 20
				5010



PART PLAN - FIRST ROW

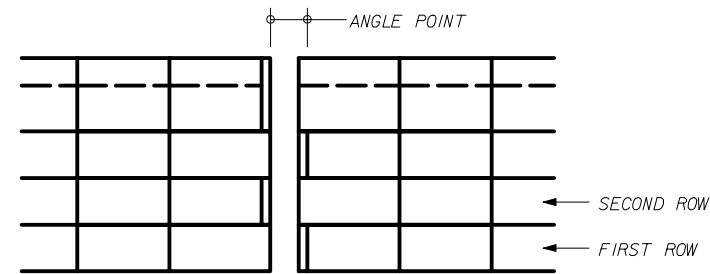


PART PLAN - SECOND ROW

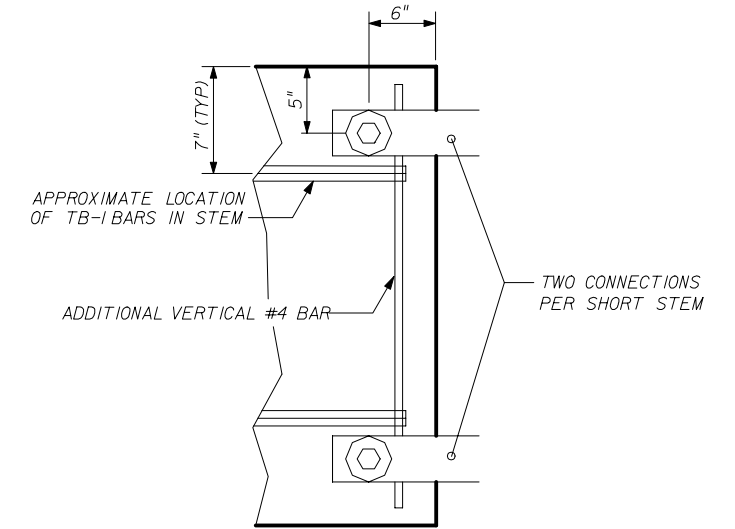


PART PLAN - ANGLE > 90°

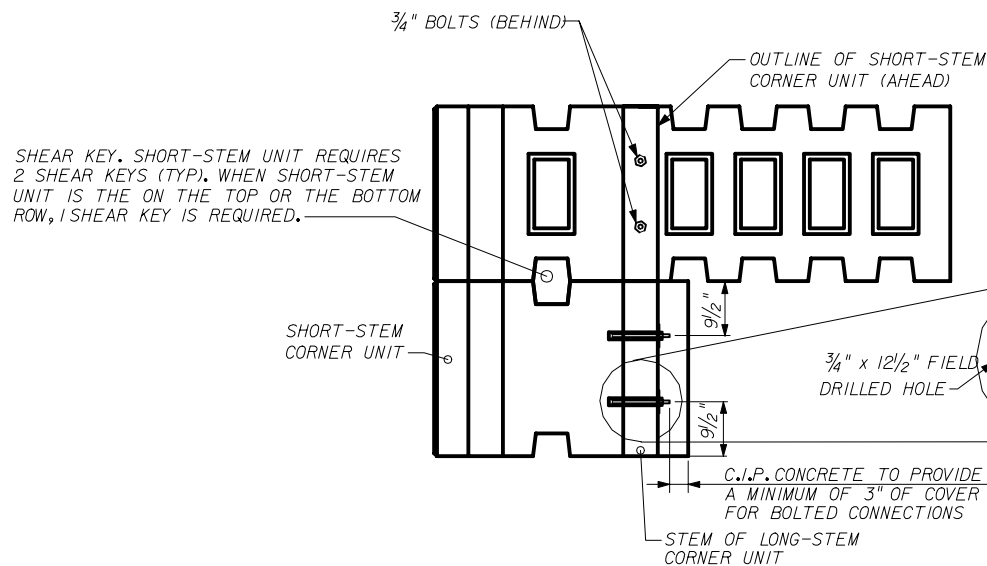
SHORT AND LONG STEMS ALTERNATE PER 90° CORNER DETAIL



PART ELEVATION

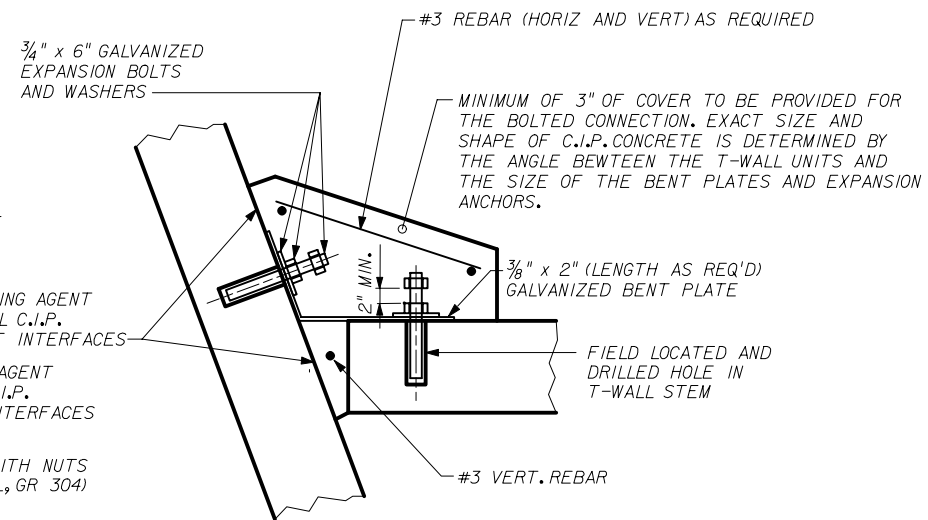


VIEW B-B



TYPICAL CORNER UNIT ARRANGEMENT

STEM LENGTHS VARY - SEE SPECIFIC ELEVATIONS FOR PROPER UNITS
NO SCALE



TYPICAL BOLTED CONNECTION FOR ANGLE POINTS

TYPICAL ANGLE POINT DETAIL

NO SCALE

NOTE: C.I.P. CONCRETE SHALL BE CLASS IV.



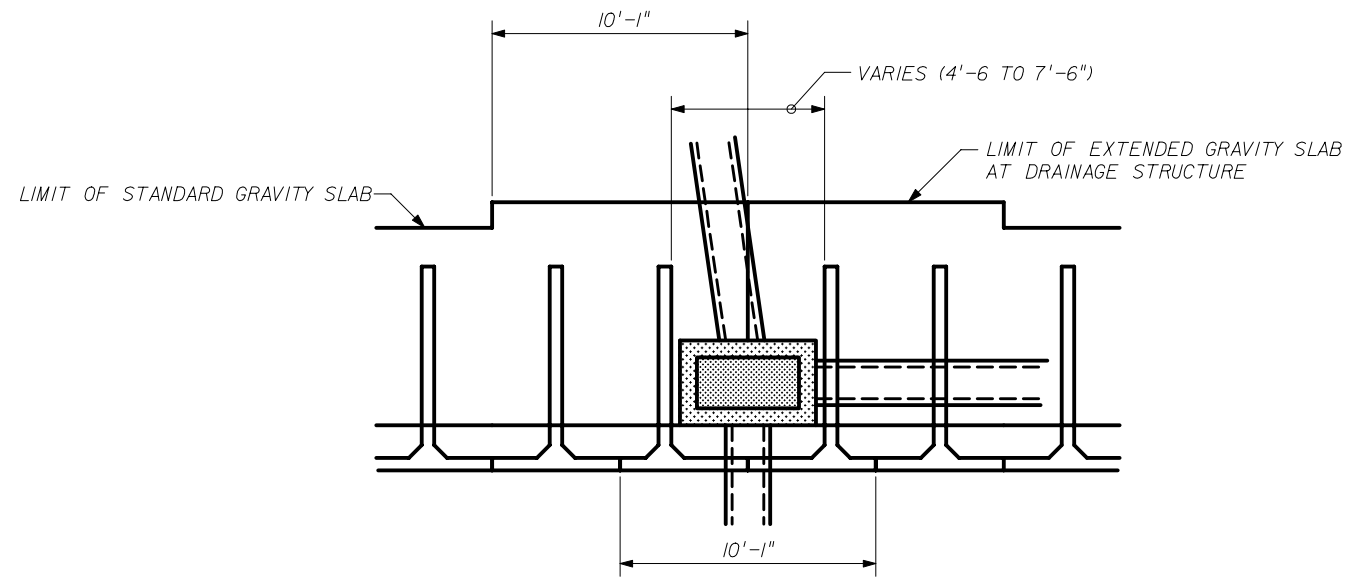
THE NEEL COMPANY
8328-D TRAFORD LANE
SPRINGFIELD, VIRGINIA 22152
PH: (703) 913-7858
FX: (703) 913-7859

OLDCASTLE PRECAST, INC.
5995 SOUTEL DR.
JACKSONVILLE, FL 32219
PH: (904) 768-7081
FX: (904) 768-8428

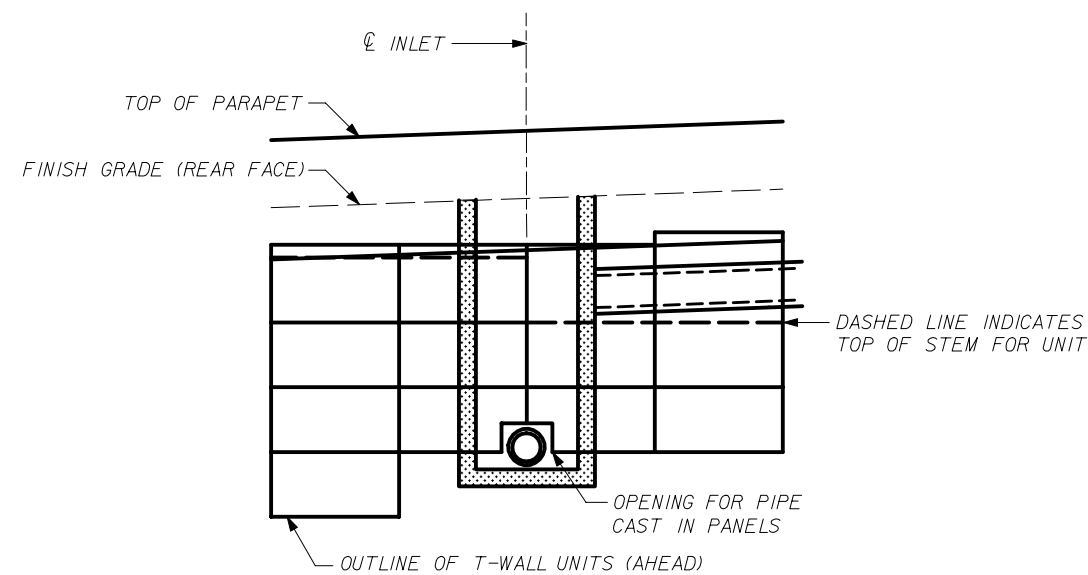
STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION

**RETAINING WALL SYSTEM
THE NEEL COMPANY T-WALL
(3" COVER)**

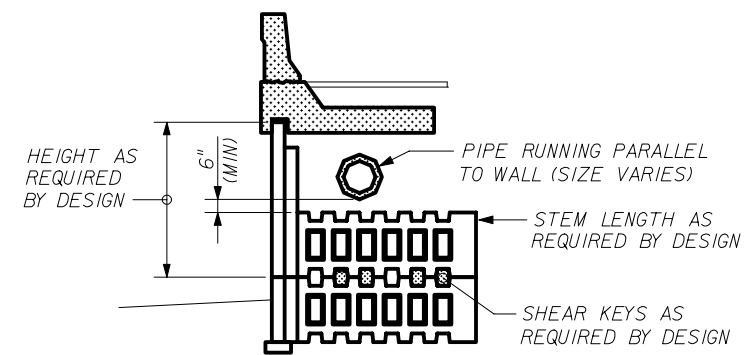
Names	Dates	Approved By <i>W. V. [Signature]</i>		
Designed By	JMC	10/01/98	State Structures Design Engineer	
Drawn By	CAA	10/01/98	Revision	Sheet No.
Checked By	JMC	10/01/98	04	4 of 20
				Index No. 5010



PART PLAN



PART ELEVATION (FRONT FACE)

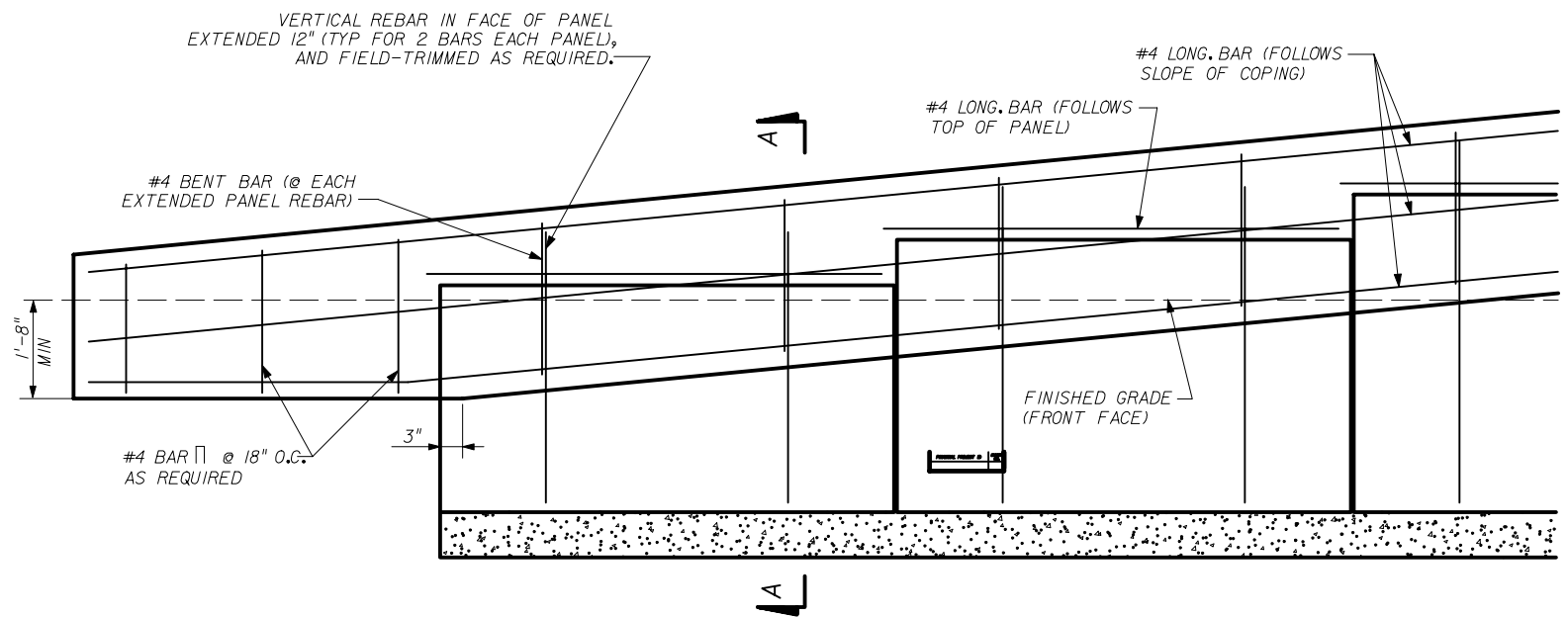


SECTION
(SHOWING PIPE PARALLEL TO WALL)

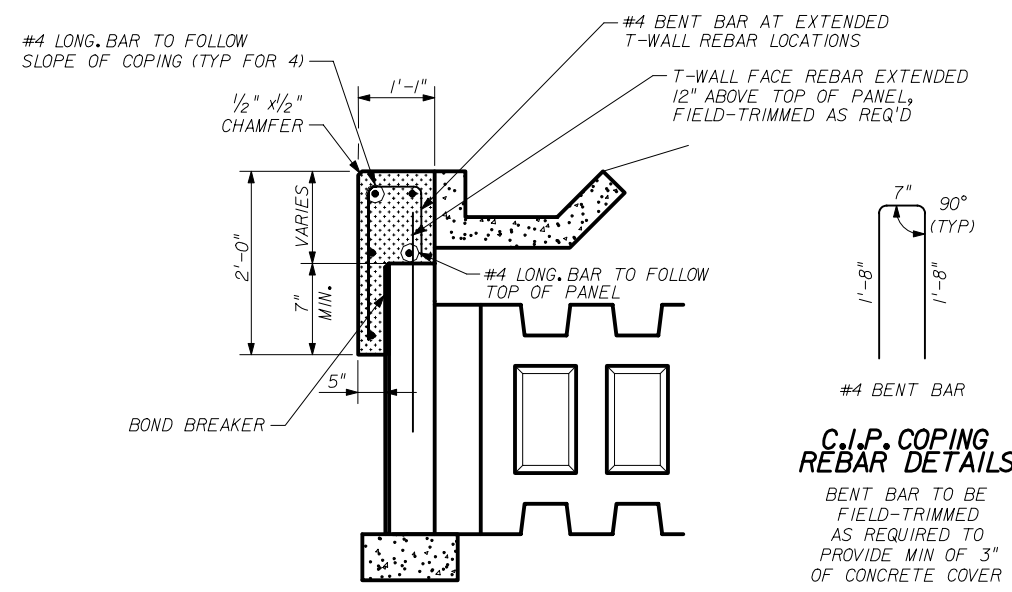
THE NEEL COMPANY
 8328-D TRAFORD LANE
 SPRINGFIELD, VIRGINIA 22152
 Ph: (703) 913-7858
 Fx: (703) 913-7859

OLDCASTLE PRECAST, INC
 5995 SOUTEL DR.
 JACKSONVILLE, FL 32219
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 Fx: (904) 768-8428

STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION				
RETAINING WALL SYSTEM THE NEEL COMPANY T-WALL (3" COVER)				
Names	Dates	Approved By <i>W. V. [Signature]</i>		
Designed By	JMC	10/01/98	State Structures Design Engineer	
Drawn By	CAA	10/01/98	Revision	Sheet No.
Checked By	TCN	10/01/98	04	5 of 20
				Index No. 5010

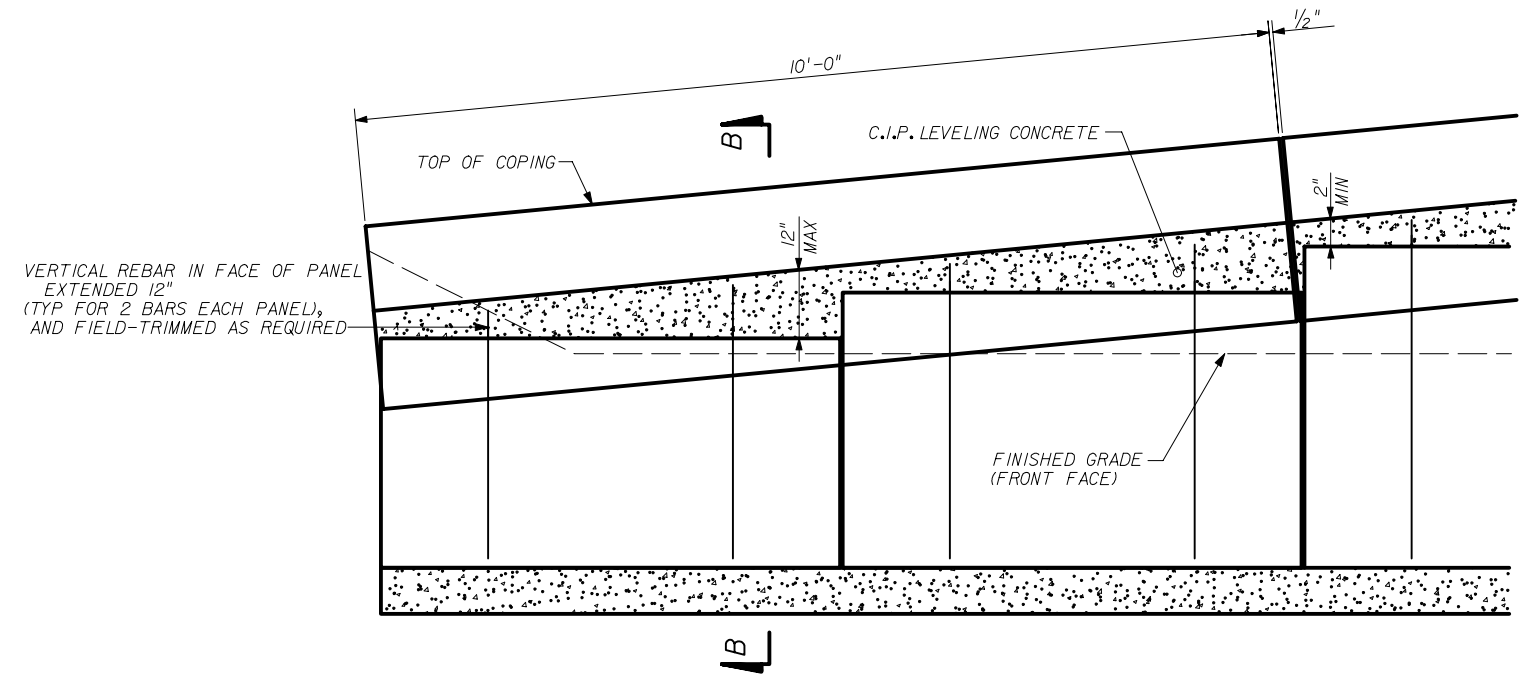


C.I.P. COPING TREATMENT AT BEGINNING/END OF WALLS

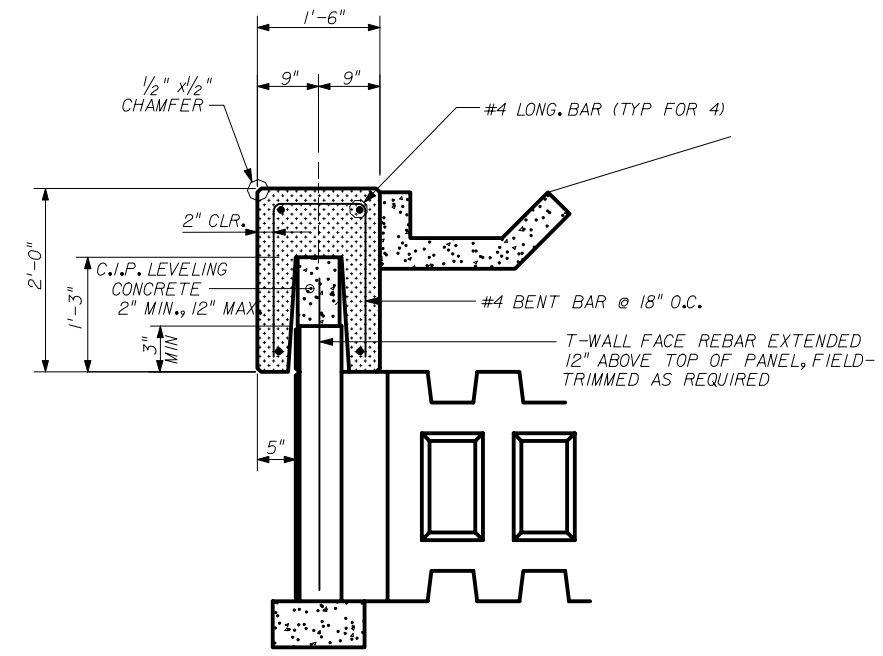


SECTION A-A
C.I.P. COPING

C.I.P. COPING REBAR DETAILS
BENT BAR TO BE FIELD-TRIMMED AS REQUIRED TO PROVIDE MIN OF 3" OF CONCRETE COVER



PRECAST COPING - PART ELEVATION

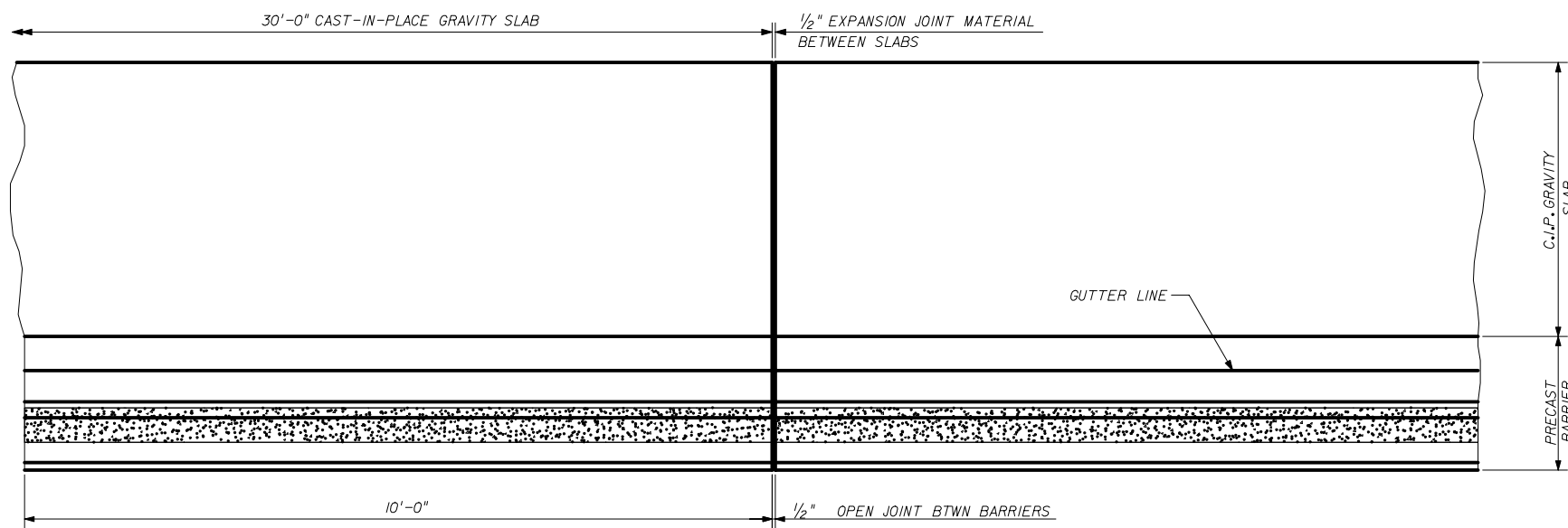


SECTION B-B
PRECAST COPING

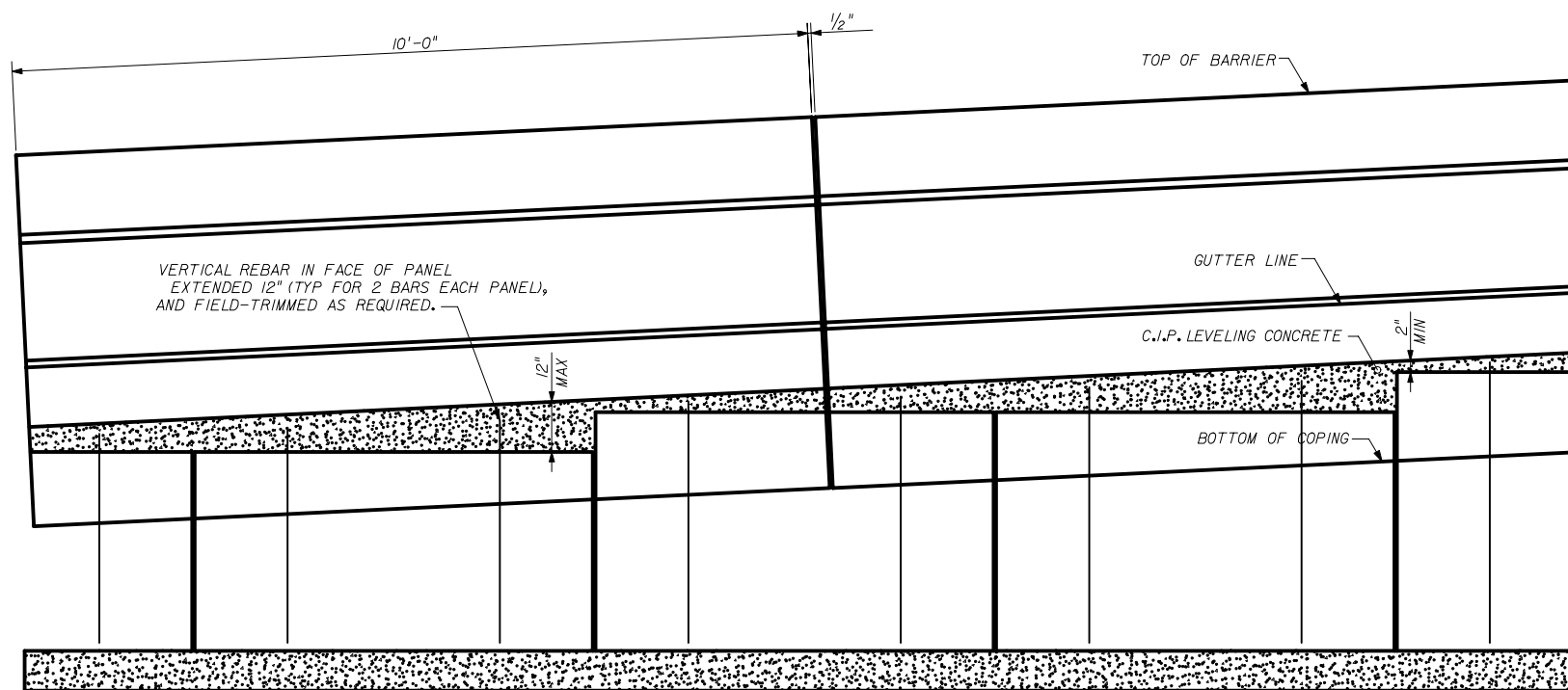
THE NEEL COMPANY
8328-D TRAFORD LANE
SPRINGFIELD, VIRGINIA 22152
PH: (703) 913-7858
FX: (703) 913-7859

OLDCASTLE PRECAST, INC.
5995 SOUTHEL DR.
JACKSONVILLE, FL 32219
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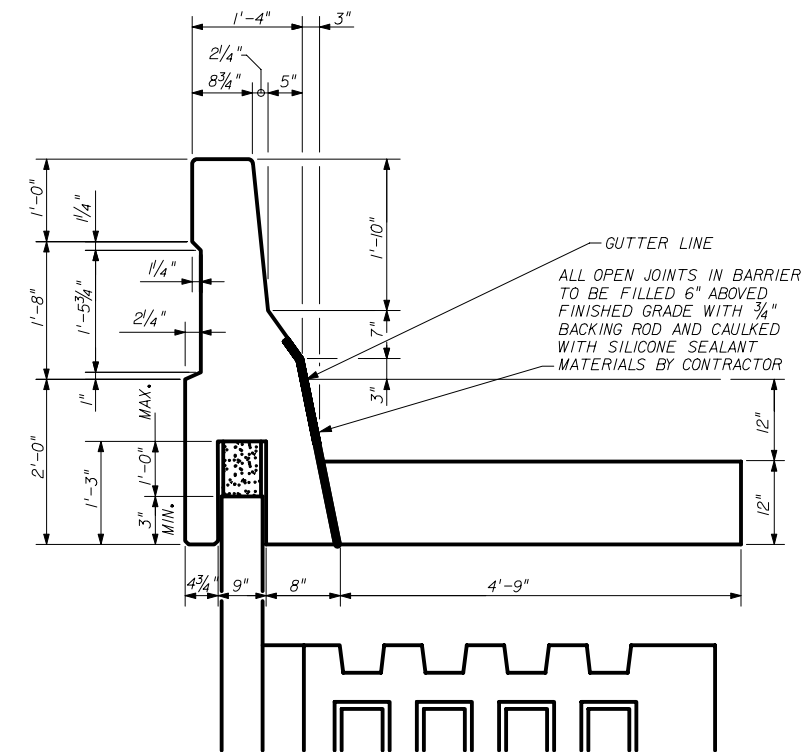
STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION				
RETAINING WALL SYSTEM THE NEEL COMPANY T-WALL (3" COVER)				
Names	Dates	Approved By <i>W. V. [Signature]</i>		
Designed By	JMC	10/01/98	State Structures Design Engineer	
Drawn By	CAA	10/01/98	Revision	Sheet No.
Checked By	JMC	10/01/98	04	6 of 20
				Index No. 5010



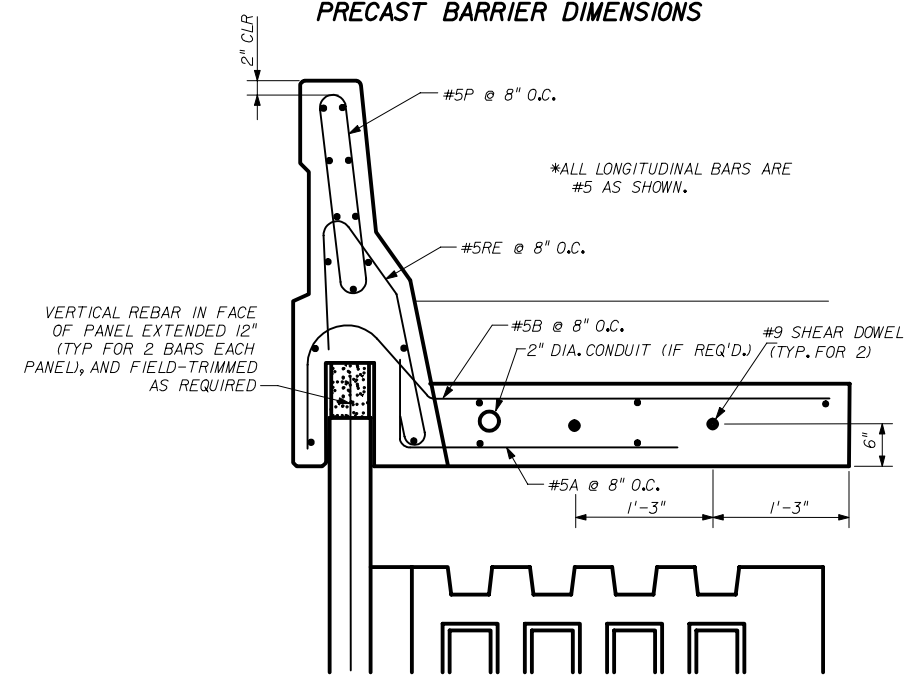
PART PLAN - PRECAST BARRIER



PART ELEVATION - PRECAST BARRIER



PRECAST BARRIER DIMENSIONS



PRECAST BARRIER REBAR

STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION

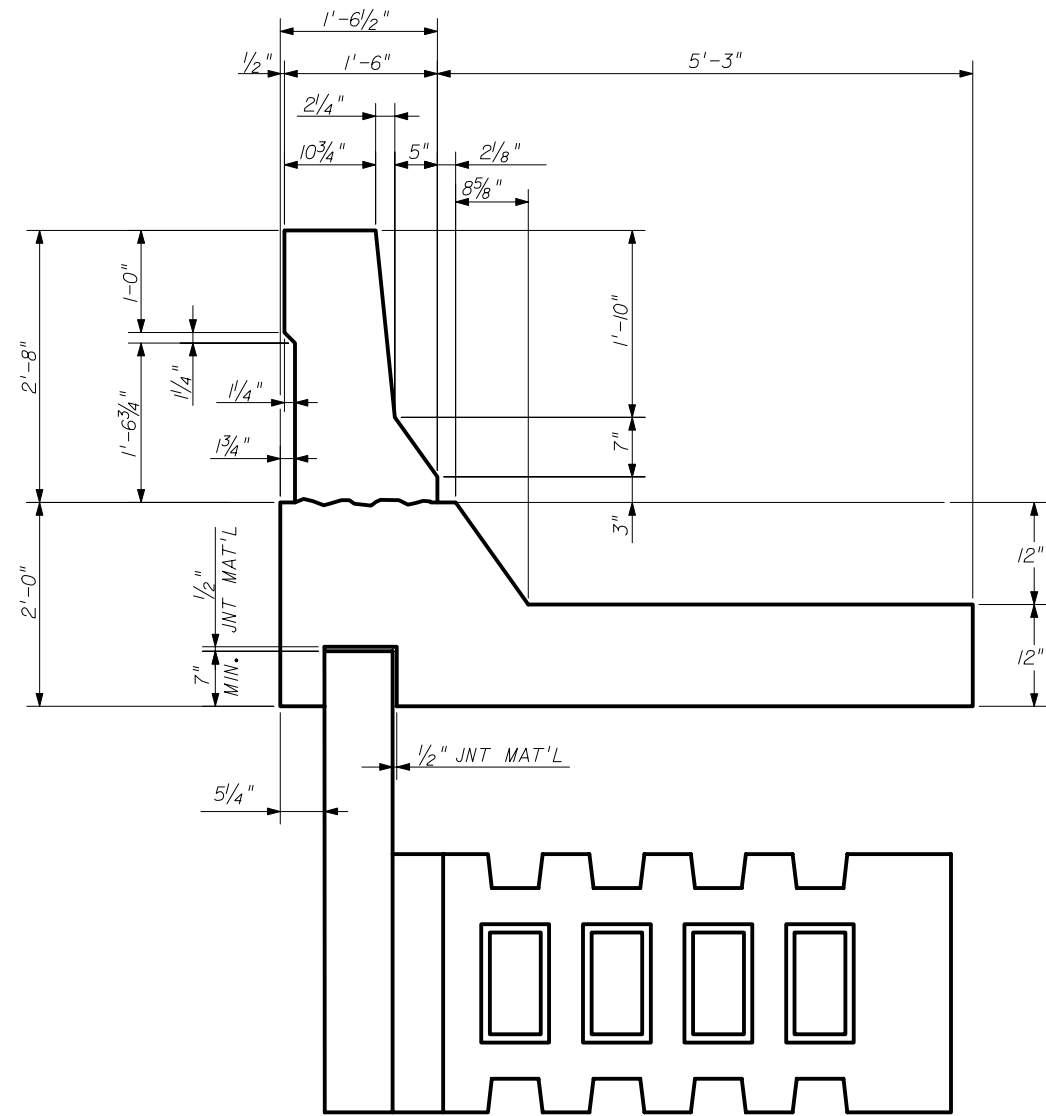
RETAINING WALL SYSTEM
THE NEEL COMPANY T-WALL
(3" COVER)

Names	Dates	Approved By	Revision	Sheet No.	Index No.
Designed By	JMC	10/01/98			
Drawn By	CAA	10/01/98			
Checked By	JMC	10/01/98	04	7 of 20	5010

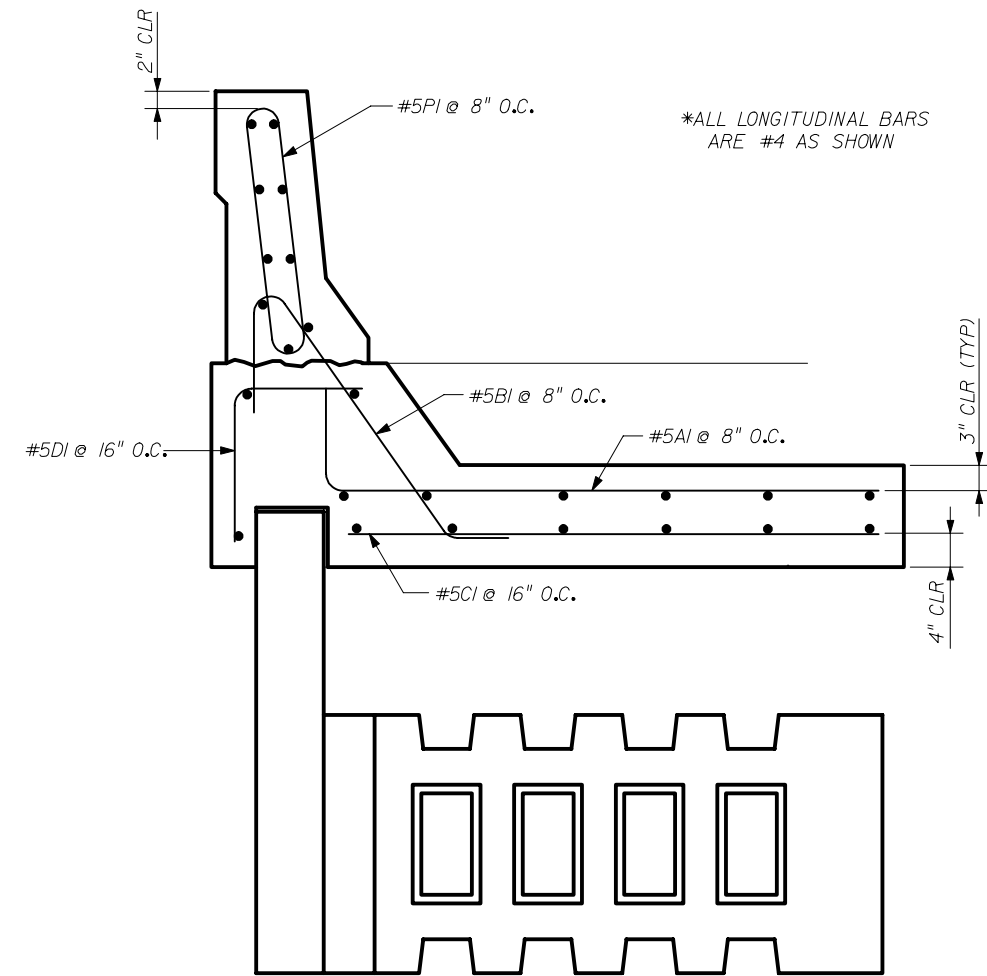


THE NEEL COMPANY
8328-D TRAFORD LANE
SPRINGFIELD, VIRGINIA 22152
PH: (703) 913-7858
FX: (703) 913-7859

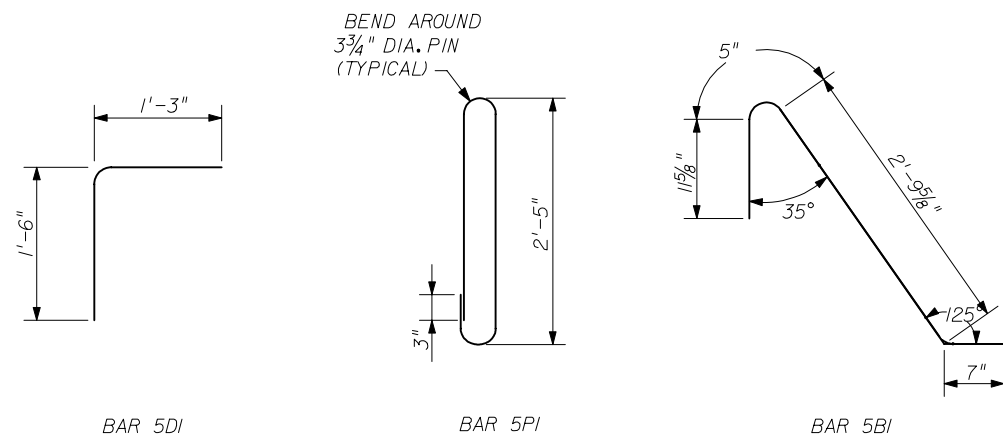
OLDCASTLE PRECAST, INC
5995 SOUTHEL DR.
JACKSONVILLE, FL 32219
PH: (904) 768-7081
FX: (904) 768-8428



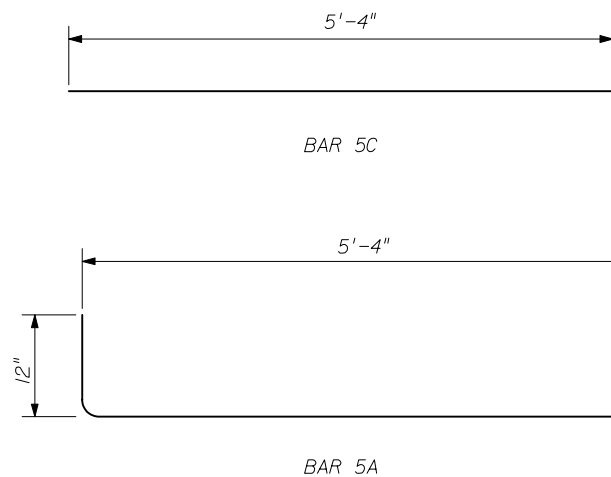
C.I.P. BARRIER AND C.I.P. JUNCTION SLAB DIMENSIONS



C.I.P. BARRIER AND C.I.P. JUNCTION SLAB REBAR



C.I.P. BARRIER REBAR DETAILS



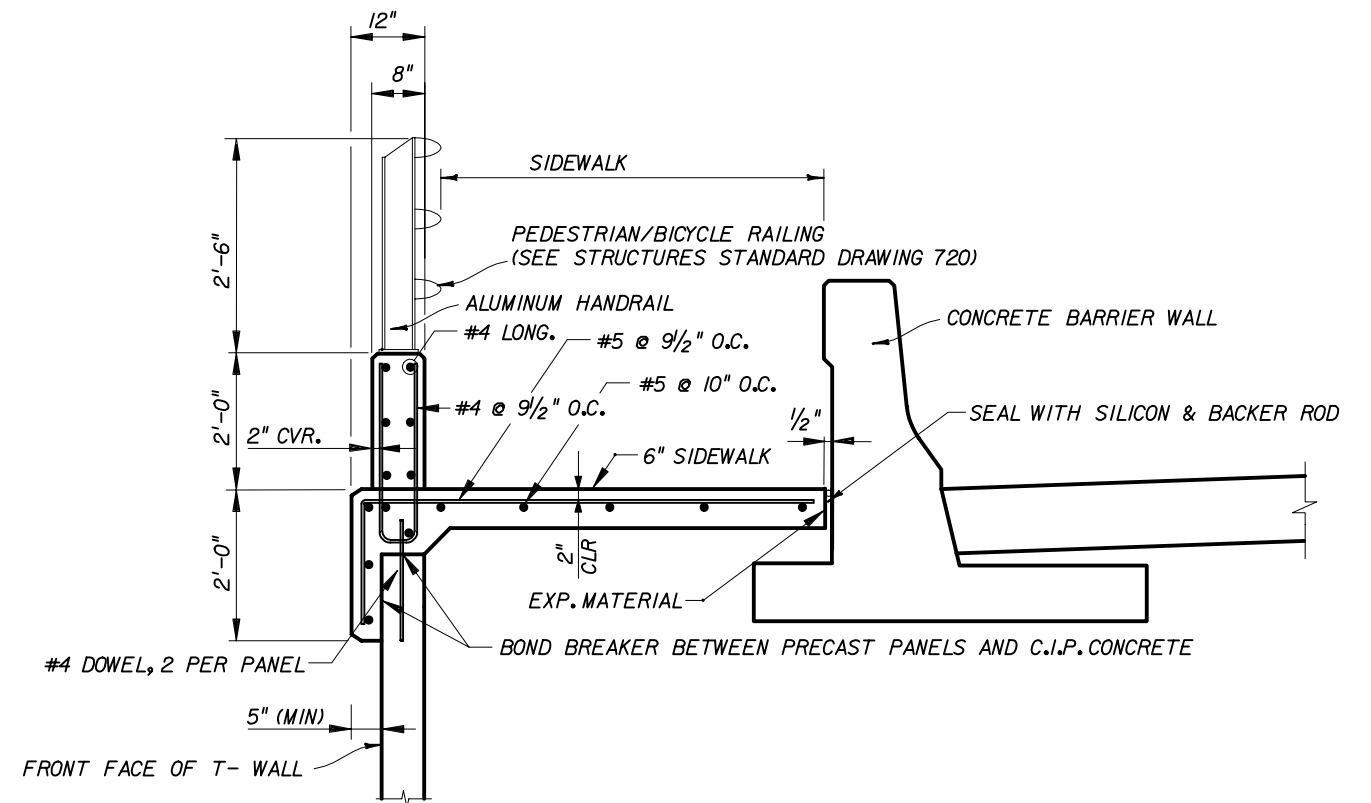
THE NEEL COMPANY
 8328-D TRAFORD LANE
 SPRINGFIELD, VIRGINIA 22152
 PH: (703) 913-7858
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OLDCASTLE PRECAST, INC.
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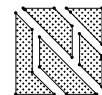
STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION

RETAINING WALL SYSTEM
 THE NEEL COMPANY T-WALL
 (3" COVER)

Names	Dates	Approved By <i>W. V. [Signature]</i>		
Designed By JMC	10/01/98	State Structures Design Engineer		
Drawn By CAA	10/01/98	Revision	Sheet No.	Index No.
Checked By JMC	10/01/98	04	8 of 20	5010



C.I.P. PARAPET DETAIL W/ HANDRAIL



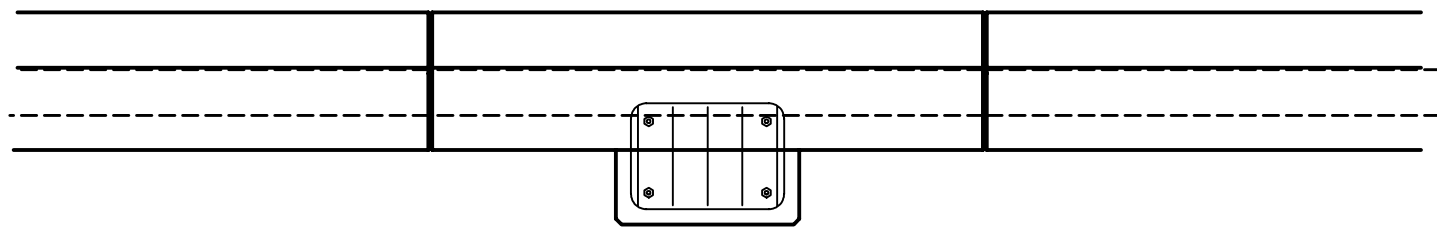
THE NEEL COMPANY
8328-D TRAFORD LANE
SPRINGFIELD, VIRGINIA 22152
PH: (703) 913-7858
FX: (703) 913-7859

OLDCASTLE PRECAST, INC.
5995 SOUTEL DR.
JACKSONVILLE, FL 32219
PH: (904) 768-7081
FX: (904) 768-8428

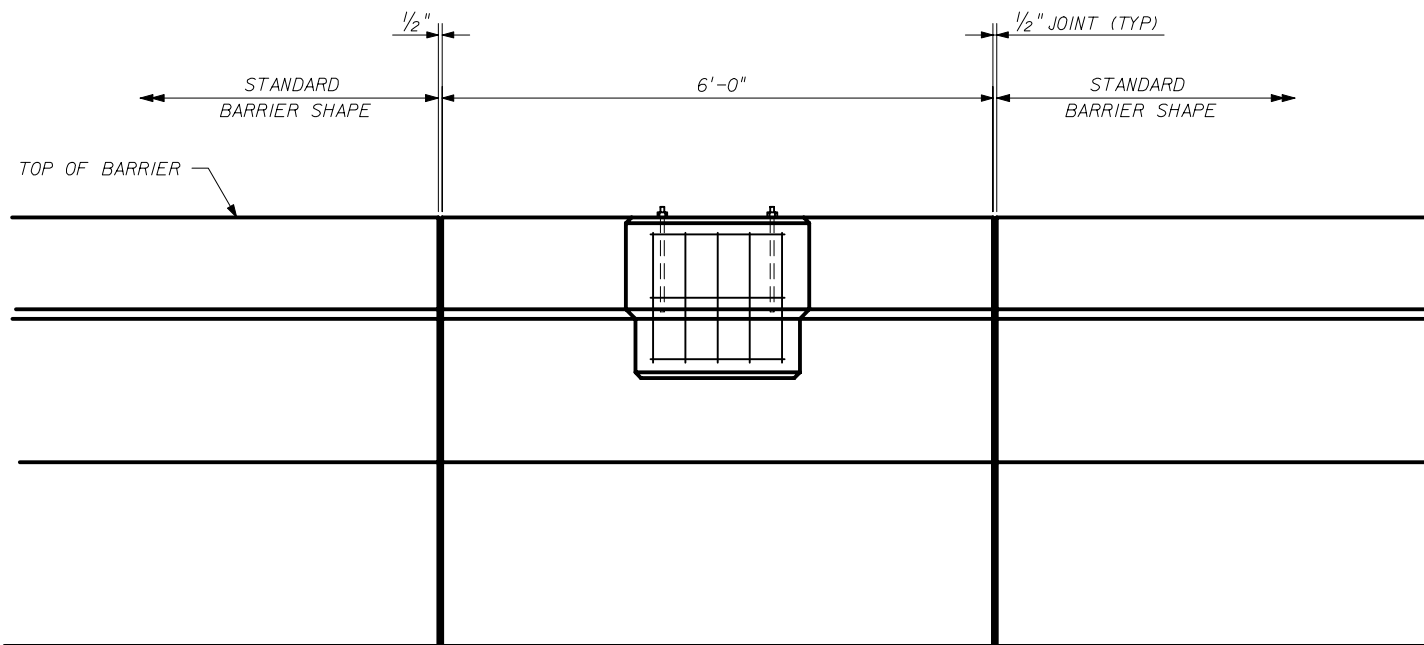
STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION

RETAINING WALL SYSTEM
THE NEEL COMPANY T-WALL
(3" COVER)

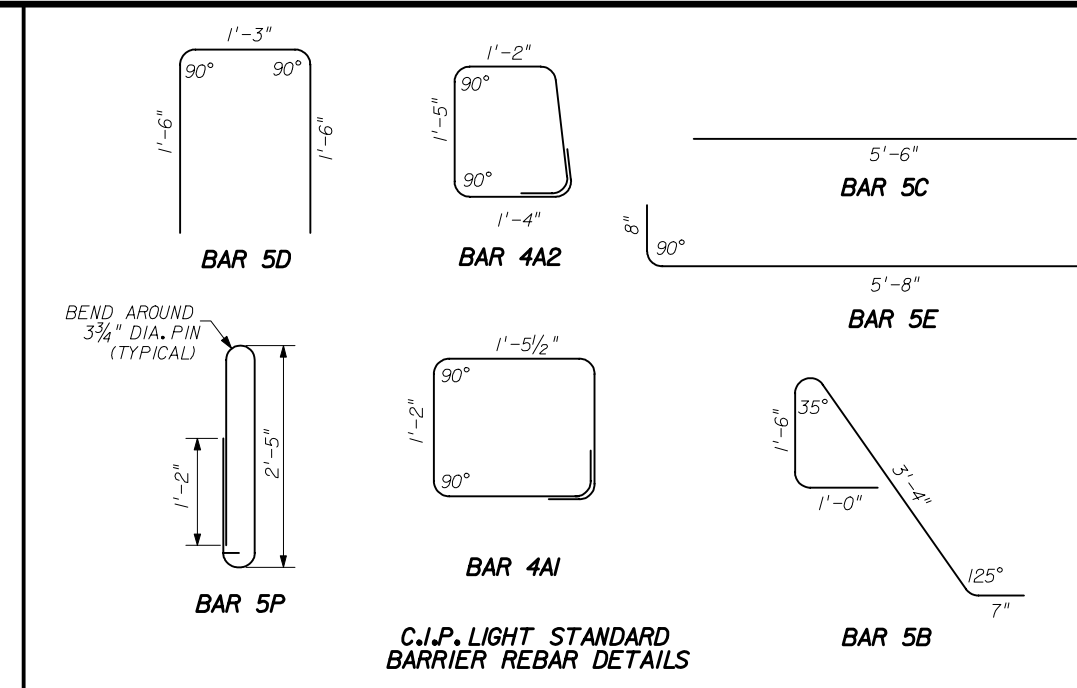
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Designed By	JMC		10/01/98	 State Structures Design Engineer	
Drawn By	CAA		10/01/98		
Checked By	JMC		10/01/98	Revision	04
				Sheet No.	9 of 20
				Index No.	5010



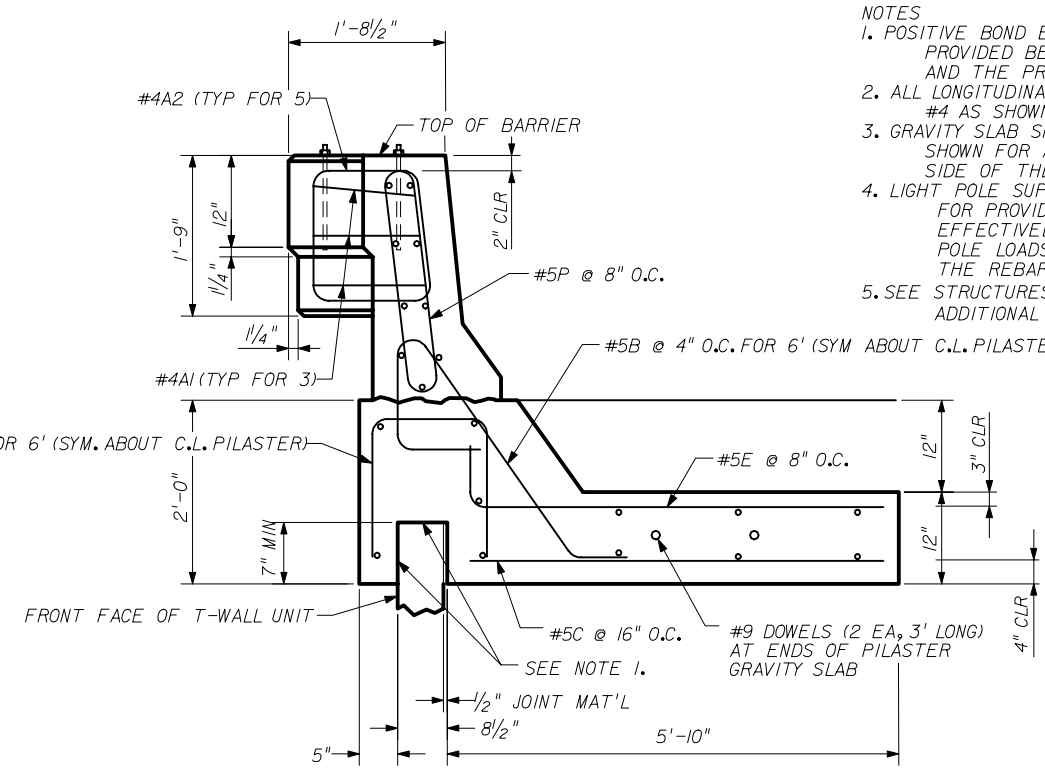
C.I.P. LIGHT STANDARD BARRIER - PART PLAN WITH REBAR
(BARRIER AND GRAVITY SLAB REBAR OMITTED FOR CLARITY)



C.I.P. LIGHT STANDARD BARRIER - PART ELEVATION
(BARRIER AND GRAVITY SLAB REBAR OMITTED FOR CLARITY)



C.I.P. LIGHT STANDARD BARRIER REBAR DETAILS



C.I.P. LIGHT STANDARD BARRIER - PART SECTION WITH REBAR

- NOTES
1. POSITIVE BOND BREAKER SHALL BE PROVIDED BETWEEN THE C.I.P. CONC. AND THE PRECAST PANEL.
 2. ALL LONGITUDINAL BARS ARE #4 AS SHOWN.
 3. GRAVITY SLAB SHALL HAVE DIMENSIONS SHOWN FOR A MIN. LENGTH OF 10'-0" EITHER SIDE OF THE LIGHT STANDARD BARRIER.
 4. LIGHT POLE SUPPLIER IS RESPONSIBLE FOR PROVIDING ANCHOR BOLTS THAT EFFECTIVELY TRANSMIT THE LIGHT POLE LOADS TO THE PILASTER AND FIT THE REBAR CAGE.
 5. SEE STRUCTURES STANDARD DRAWING 500 FOR ADDITIONAL DETAILS.

THE NEEL COMPANY
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5995 SOUFEL DR.
JACKSONVILLE, FL 32219
PH: (904) 768-7081
FX: (904) 768-8428

STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION				
RETAINING WALL SYSTEM THE NEEL COMPANY T-WALL (3" COVER)				
Names	Dates	Approved By <i>W. V. [Signature]</i>		
Designed By	JMC	10/01/98	State Structures Design Engineer	
Drawn By	CAA	10/01/98	Revision	Sheet No.
Checked By	JMC	10/01/98	04	10 of 20
				Index No. 5010